

**12436500 COLUMBIA RIVER AT GRAND COULEE DAM, WA**Upper Columbia Basin  
Chief Joseph Subbasin

LOCATION.--Lat 47°57'56", long 118°58'54" referenced to North American Datum of 1927, in SW ¼ SE ¼ sec.36, T.29 N., R.30 E., Okanogan County, WA, Hydrologic Unit 17020005, in pier 3 on west side of bridge on State Highway 155, 3,200 ft downstream from Grand Coulee Dam, 14.2 mi upstream from Nespelem River, and at mile 596.3.

DRAINAGE AREA.--74,700 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--April 1913 to June 1923 (monthly discharge only), July to December 1923, January 1924 to May 1928 (monthly discharge only), June 1928 to current year. Published as "at Grand Coulee near Nespelem" prior to 1936 and as "at Grand Coulee" 1936-42.

REVISED RECORDS.--WSP 1286: 1942, 1947. WSP 1933: Drainage area.

GAGE.--Daily discharge determined from flow through turbines plus spillway flow when present. Datum of gage is NGVD of 1929, adjustment of 1937 (Bureau of Reclamation datum). June 27 to Dec. 31, 1923, June 12, 1928, to Mar. 31, 1931, nonrecording gage at site 0.5 mi upstream at datum 2.4 ft lower. Apr. 1, 1931, to Dec. 31, 1935, water-stage recorder 850 ft downstream at present datum. Jan. 1, 1936, to June 11, 1955, water-stage recorder at present site and datum. June 12, 1955, to July 18, 1988, water-stage recorder at present site and datum with auxiliary water-stage recorder 5.3 mi downstream at datum 1.42 ft lower.

COOPERATION.--Discharge records provided by Bureau of Reclamation at Grand Coulee Dam through the Corps of Engineers, Northwestern Division, Reservoir Control Center. The U.S. Geological Survey made three discharge measurements at this site during the year.

REMARKS.--Flow is regulated by numerous reservoirs. Feeder Canal diversion (station 12435500) for Columbia Basin project is used to irrigate approximately 600,000 acres in the United States. An additional 66,500 acres in Canada are irrigated by other diversions.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.-- 94 years (water years 1914-2007), 108,100 ft<sup>3</sup>/s, 78,320,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 637,800 ft<sup>3</sup>/s, June 12, 1948, elevation, 987.90 ft; minimum discharge, 14,900 ft<sup>3</sup>/s, Dec. 17, 1956, elevation, 934.37 ft; minimum daily discharge, 15,300 ft<sup>3</sup>/s, Feb. 1, 1937.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a discharge of 725,000 ft<sup>3</sup>/s, estimated.

EXTREMES FOR CURRENT YEAR.-- Maximum daily discharge, 183,000 ft<sup>3</sup>/s, Apr. 3, May 7; minimum daily discharge, 36,200 ft<sup>3</sup>/s, Nov. 8.

## 12436500 COLUMBIA RIVER AT GRAND COULEE DAM, WA—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	41,600	94,100	101,000	61,300	106,000	120,000	154,000	130,000	121,000	99,400	125,000	70,200
2	72,300	101,000	98,800	70,500	114,000	121,000	178,000	130,000	113,000	101,000	114,000	75,900
3	70,700	80,400	95,500	85,400	84,000	79,700	183,000	151,000	89,600	127,000	131,000	52,800
4	61,300	50,100	106,000	87,900	64,800	71,200	172,000	157,000	142,000	115,000	108,000	74,800
5	74,900	56,100	112,000	112,000	89,400	96,100	161,000	145,000	116,000	132,000	79,700	60,000
6	61,300	71,800	101,000	93,800	109,000	90,100	143,000	140,000	120,000	102,000	116,000	54,300
7	48,700	71,500	106,000	45,000	112,000	105,000	131,000	183,000	155,000	97,000	117,000	69,900
8	50,200	36,200	119,000	99,200	105,000	105,000	99,500	167,000	171,000	83,000	128,000	55,800
9	79,200	67,300	88,000	95,700	112,000	79,100	141,000	143,000	149,000	132,000	124,000	45,200
10	86,100	73,500	71,800	99,800	106,000	77,200	135,000	130,000	145,000	147,000	115,000	68,800
11	77,600	66,600	99,900	110,000	87,700	56,900	132,000	128,000	155,000	145,000	126,000	61,700
12	67,700	81,700	97,800	141,000	115,000	93,500	136,000	142,000	149,000	144,000	101,000	71,300
13	55,500	88,900	83,200	143,000	94,500	86,200	154,000	109,000	142,000	152,000	140,000	65,500
14	42,000	97,100	80,800	122,000	95,200	89,100	136,000	142,000	154,000	141,000	139,000	57,900
15	46,300	85,200	55,800	137,000	82,000	123,000	111,000	136,000	164,000	134,000	105,000	55,300
16	66,600	67,200	65,800	127,000	57,100	119,000	155,000	138,000	143,000	130,000	101,000	44,500
17	74,400	80,800	91,600	136,000	42,800	106,000	141,000	130,000	103,000	135,000	100,000	63,000
18	71,700	63,900	114,000	136,000	48,000	88,500	151,000	126,000	135,000	128,000	68,000	63,400
19	79,000	47,500	104,000	123,000	85,000	120,000	148,000	113,000	152,000	135,000	73,000	62,300
20	65,400	60,000	107,000	117,000	60,600	119,000	149,000	108,000	150,000	124,000	115,000	57,500
21	46,700	63,700	98,600	112,000	71,500	136,000	132,000	134,000	150,000	116,000	120,000	46,900
22	51,300	68,400	94,700	119,000	70,100	153,000	110,000	136,000	124,000	99,200	106,000	41,600
23	79,900	44,500	86,700	116,000	57,800	144,000	147,000	140,000	106,000	133,000	115,000	37,100
24	73,900	51,700	71,400	125,000	56,700	138,000	153,000	148,000	81,800	135,000	111,000	70,700
25	68,200	67,400	46,400	133,000	51,500	100,000	147,000	157,000	131,000	149,000	73,600	62,600
26	61,500	74,500	83,000	135,000	83,300	136,000	137,000	145,000	148,000	148,000	60,200	64,600
27	59,200	105,000	91,200	134,000	70,600	135,000	143,000	148,000	136,000	132,000	97,400	69,800
28	50,800	107,000	91,900	124,000	93,000	159,000	126,000	134,000	141,000	112,000	113,000	55,200
29	50,200	113,000	89,600	139,000	---	164,000	122,000	158,000	131,000	111,000	128,000	41,500
30	86,800	88,100	65,800	130,000	---	182,000	142,000	136,000	108,000	142,000	136,000	43,800
31	112,000	---	70,400	98,700	---	151,000	---	135,000	---	138,000	111,000	---
<b>Total</b>	2,033,000	2,224,200	2,788,700	3,508,300	2,324,600	3,543,600	4,269,500	4,319,000	4,025,400	3,918,600	3,396,900	1,763,900
<b>Mean</b>	65,580	74,140	89,960	113,200	83,020	114,300	142,300	139,300	134,200	126,400	109,600	58,800
<b>Max</b>	112,000	113,000	119,000	143,000	115,000	182,000	183,000	183,000	171,000	152,000	140,000	75,900
<b>Min</b>	41,600	36,200	46,400	45,000	42,800	56,900	99,500	108,000	81,800	83,000	60,200	37,100
<b>Ac-ft</b>	4,032,000	4,412,000	5,531,000	6,959,000	4,611,000	7,029,000	8,469,000	8,567,000	7,984,000	7,773,000	6,738,000	3,499,000

	Calendar Year 2006	Water Year 2007
<b>Total</b>	38,375,600	38,115,700
<b>Mean</b>	105,100	104,400
<b>Max</b>	224,000	183,000
<b>Min</b>	29,000	36,200
<b>Ac-ft</b>	76,120,000	75,600,000

**12436500 COLUMBIA RIVER AT GRAND COULEE DAM, WA—Continued**

